

Increase Profits by Achieving Full Value from Subcontractors

Builder Guide



DESCRIPTION

Look for increased profits where high quality subcontractor work is better ensured. The ENERGY STAR labeled homes program encourages field tests that can improve quality control across a number of important building components. If any of these tests indicate problems, you can secure important corrections at the subcontractor's expense before possible customer complaints or litigation occur. Conducting these simple tests will also increase confidence that your subcontractors are performing high quality work. The four field tests are:

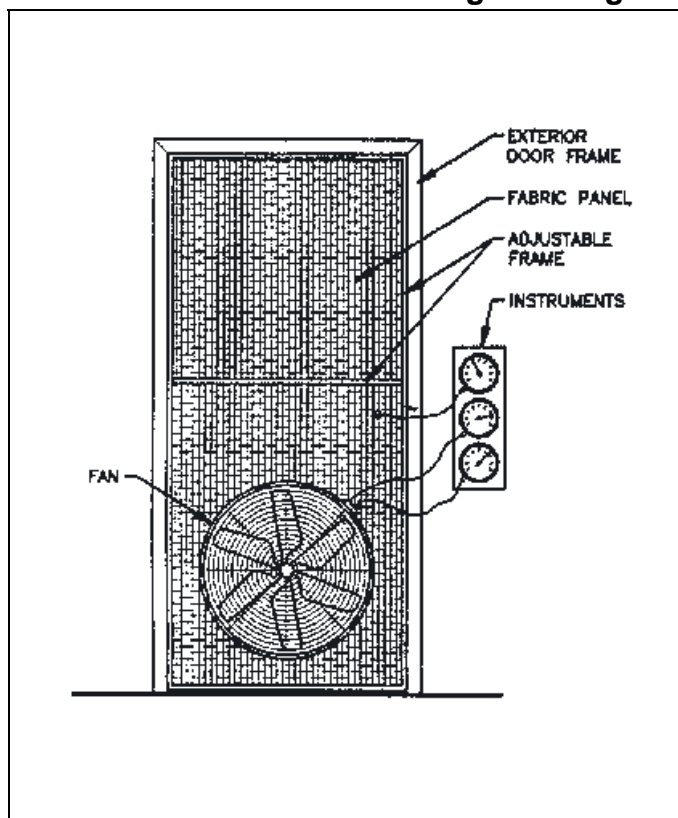
- ☐ **A blower door test** to detect excessive air leakage that can create uncomfortable drafts, potential humidity damage, and high utility bills;
- ☐ **A duct leakage test** verifying ducts were fully sealed to assure homeowner comfort, safe indoor environment, and lower utility bills;
- ☐ **HVAC system inspection** to check and replace filter if dirty and check and clean coil if dirty; and
- ☐ **Testing air flow across the inside coil** to ensure proper air flow to the duct system.



BENEFITS

Conducting the simple field tests mentioned above ensures that your subcontractors have met your performance expectations. Offering home buyers greater assurance of quality construction can result in increased home sales as well as reduced instances of customer callbacks or potential litigation. In addition, both you and your customers will know that key components essential to home buyer comfort will function as intended. These

Blower Door for Air Leakage Testing



assurances allow you to distinguish your product from the competition in the marketplace.

- ☐ **Reduced callbacks/litigation from dissatisfied customers.**

By conducting simple testing procedures prior to the new home buyer moving into the house, you can identify specific problems or components that do not meet good building practice standards and have them corrected by the subcontractor.

Moreover, subcontractors that understand they will be held accountable for their performance are more likely to meet your performance standards the first time around. This can reduce potential contractual problems resulting from after the fact call backs by customers.

Most importantly, many causes of litigation can be reduced significantly through additional quality control of construction practices. Look for your staff to spend less time addressing customer complaints and more time building and selling quality homes -- which can add up to more referrals and profit for you.

☐ **Improved home buyer comfort.**

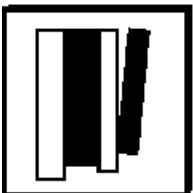
Testing the envelope, mechanical equipment and distribution system function as intended ensures reduced drafts, properly functioning heating and cooling equipment, and proper air distribution. These are key factors affecting homeowner comfort.

☐ **Home buyers are assured of quality construction.**

The simple tests discussed here allow you to assure your customers of a high quality product. In addition, other details associated with quality construction and high quality equipment can provide your customers with homes of superior quality and energy-efficient performance.

☐ **Expected performance results are more likely to match predicted results.**

Where you conduct the recommended field tests, you can assure home buyers that the home they buy will be as comfortable and energy efficient as you have advertised. It has become commonplace for home buyers of resale housing to purchase home inspections because they recognize the value of thoroughly examining the largest investment of their lifetimes. In a similar manner, you can distinguish your homes from the competition by offering these critical, yet simple, tests to assure the quality of your product has been verified where other homes on the market have not.



RESOURCES

- ☐ *Pacific Gas and Electric Appliance Doctor: Implications for Residential Air Conditioning System Installation Practices*, John Proctor, P.E. and Amy Polak, Proctor Engineering Group, Proceedings from Building for the Future, 1992.

Blower Door Testing

- ☐ ASHRAE Standard 119 - *“Air Leakage Performance for Residential Buildings”*, ASHRAE, Atlanta, GA; 404/636-8400.
- ☐ ANSI/ASHRAE Standard 136 - *“A Method for Determining Air Change Rates in Detached Dwellings”*, ASHRAE, Atlanta, GA; 404/636-8400.

Duct Leakage Testing

- ☐ *Duct Leakage Measurement Techniques*, Florida Solar Energy Center, Cummings, Tooley, and Moyer; 407/638-1000
- ☐ *Duct Repair Techniques*, Proctor Engineering Group; 415/455-5700.

Coil Airflow Testing

- ☐ *Research: Impacts of Reduced Evaporator Flow on System Efficiency*, Texas A&M University, Palani, O'Neal, Haberl.
- ☐ *Air Flow Testing Procedures*, Air-Conditioning and Refrigeration Institute (ARI), Arlington, VA, 703/524-8800.